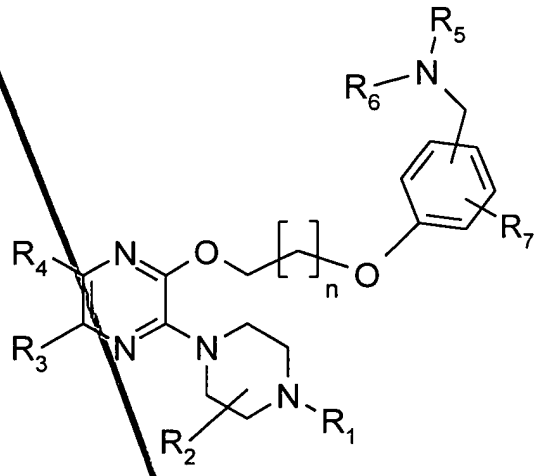
1. A compound of the general formula (I):



(I)

wherein

R_1 is hydrogen, C_{1-4} alkyl, C_{3-4}-alkenyl, C_{1-4}-acyl, C_{1-4}-alkoxycarbonyl, 2-hydroxyethyl, 2-cyanoethyl, tetrahydropyran-2-yl, or a nitrogen protecting group;

R_2 is hydrogen, C_{1-4}-alkyl, hydroxymethyl, C_{1-4}-alkoxymethyl, or fluoromethyl;

R_3 and R_4 independently of each other are hydrogen, methyl, C_{1-4}-alkyl, aryl, heteroaryl wherein aryl and heteroaryl residues in turn may be substituted in one or more positions independently of each other by halogen, C_{1-4}-alkyl, C_{1-4}-alkoxy, C_{1-4}-alkylthio, C_{1-4}-alkylsulphonyl, methanesulphonamido, acetyl, nitro, cyano, hydroxy, trifluoromethyl, trifluoromethoxy, trifluoromethylthio, amino, methylamino, dimethylamino, or acetamido;

or

R_3 and R_4 together with the carbon atoms to which they are bound form a 5- or 6-membered aromatic or heteroaromatic ring, which may be substituted in one or more positions by halogen, methyl, methoxy, methylthio, methylsulphonyl, nitro, cyano, hydroxy, trifluoromethyl, trifluoromethylthio, amino, methylamino, dimethylamino or acetamido;

R_5 and R_6 independently of each other are hydrogen, C_1-C_4-alkoxy-C_2-C_4-alkyl, hydroxy-C_2-C_4-alkyl, C_1-C_6-alkyl, C_2-C_6-acyl, aryl, heteroaryl, aryl-C_1-C_2-alkyl, heteroaryl-C_1-C_2-alkyl, aryl-C_1-C_2-acyl, heteroaryl-C_1-C_2-acyl, and wherein any aryl or heteroaryl, alone or as part of another group, may be independently substituted in one or more positions by C_{1-4}-alkyl, C_{1-4}-alkoxy, C_{1-4}-alkylthio, C_{2-4}-acyl, C_{1-4}-alkylsulphonyl, cyano, nitro, hydroxy, C_{2-3}-alkenyl, C_{2-3}-alkynyl, fluoromethyl, trifluoromethyl, trifluoromethoxy, halogen, dimethylamino, or methylamino; or

R_5 and R_6 together with the nitrogen atom to which they are bound form a saturated heterocyclic ring having 4-7 ring members which ring may contain an additional heteroatom and which may be substituted by methyl, oxo, or hydroxy;

R_7 is hydrogen or a substituent selected from halogen, methyl, methoxy, and ethoxy; and

n = 1 – 3;

and pharmaceutically acceptable salts, hydrates, geometrical isomers, tautomers, optical isomers, *N*-oxides or prodrug forms thereof.

2. The compound according to claim 1, wherein R_1 is hydrogen or methyl.

3. The compound according to claim 1, wherein R_1 is hydrogen.

4. The compound according to claim 1, wherein R_2 is hydrogen or methyl.

5. The compound according to claim 1, wherein R_3 and R_4 independently are hydrogen, halogen or methyl; or wherein R_3 and R_4 form a ring together with the ring carbons to which they are bound and the ring is benzene, to give quinoxaline, or thiophene, to give thieno[3,4-b]pyrazine, and when the rings are substituted, they are mono- or disubstituted.

6. The compound according to claim 1, wherein R_3 and R_4 both are hydrogen.

7. The compound accordning to claim 1, wherein R_7 is hydrogen.

8. The compound according to claim 1, wherein R_7 is hydrogen and the group $-CH_2N(R_5)(R_6)$ is attached to the *meta*-position, relative to the alkylenedioxy side-chain, of the phenyl ring.

9. The compound according to claim 1, wherein R_5 and R_6 together with the nitrogen atom to which they are bound form a ring selected from azetidine, pyrrolidine, piperazine, homopiperazine, morpholine, thiomorpholine, and piperidine.

10. The compound according to claim 1, wherein n = 1.

11. The compound according to claim 1, selected from
2-(1-Piperazinyl)-3-{2-[3-(4-morpholinylmethyl)phenoxy]ethoxy}pyrazine;
2-(1-Piperazinyl)-3-{2-[3-(1-pyrrolidinylmethyl)phenoxy]ethoxy}pyrazine;
2-(1-Piperazinyl)-3-{2-[3-(4-methyl-1-piperazinylmethyl)phenoxy]ethoxy}pyrazine;
2-(1-Piperazinyl)-3-{2-[3-{(2-methoxyethyl)amino}methyl)phenoxy]ethoxy}pyrazine; and
2-(1-Piperazinyl)-3-{2-[3-{(isopropylamino)methyl}phenoxy]ethoxy}pyrazine and their pharmacologically acceptable salts and solvates.

12. A pharmaceutical composition comprising a compound according to claim 1 as an active ingredient, together with a pharmacologically and pharmaceutically acceptable carrier.

13. A method for the prophylaxis or treatment of a serotonin-related disease in a human being or in an animal, which method comprises administering to a subject in need thereof an effective amount of a compound according to claim 1.

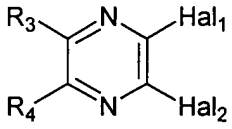
14. The method according to claim 13 wherein said disease is a 5-HT_{2c} receptor-related disease.

15. The method according to claim 13 wherein said disease is selected from eating disorders, memory disorders, schizophrenia, mood disorders, anxiety disorders, pain, substance abuse, sexual dysfunctions, epilepsy and urinary disorders.

16. The method according to claim 13 wherein the eating disorder is obesity.

17. A method for modulating $5HT_{2c}$ receptor functions in a human being or animal, comprising administering to a subject in need thereof an effective amount of a compound according to claim 1.

18. A method for preparing a compound according to claim 1, comprising converting a compound of formula (II):



(II);

wherein R_3 and R_4 independently of each other are hydrogen, methyl, C_{1-4}-alkyl, aryl, heteroaryl wherein aryl and heteroaryl residues in turn may be substituted in one or more positions independently of each other by halogen, C_{1-4}-alkyl, C_{1-4}-alkoxy, C_{1-4}-alkylthio, C_{1-4}-alkylsulphonyl, methanesulphonamido, acetyl, nitro, cyano, hydroxy, trifluoromethyl, trifluoromethoxy, trifluoromethylthio, amino, methylamino, dimethylamino, or acetamido; or

R_3 and R_4 together with the carbon atoms to which they are bound form a 5- or 6-membered aromatic or heteroaromatic ring, which may be substituted in one or more positions by halogen, methyl, methoxy, methylthio, methylsulphonyl, nitro,

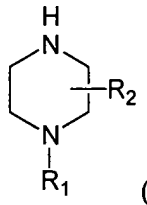
cyano, hydroxy, trifluoromethyl, trifluoromethylthio, amino, methylamino, dimethylamino or acetamido; and

each of Hal_1 and Hal_2, independently, is halogen;

to the compound of claim 1.

19. The method according to claim 18, comprising:

contacting a compound of formula (II) with a compound of formula (III):



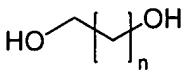
(III);

wherein R_1 is hydrogen or C_{1-4} alkyl, C_{3-4}-alkenyl, C_{1-4}-acyl, C_{1-4}-alkoxycarbonyl, 2-hydroxyethyl, 2-cyanoethyl or tetrahydropyran-2-yl, or a nitrogen protecting group; and

R_2 is hydrogen, C_{1-4}-alkyl, hydroxymethyl, C_{1-4}-alkoxymethyl or fluoromethyl;

to form a first intermediate (IV);

contacting the first intermediate with a compound of formula (V):

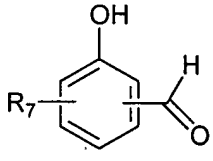


(V);

wherein n is 1-3;

to form a second intermediate (VI);

contacting the second intermediate with a compound of formula (VII):

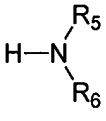


(VII);

wherein R_7 is hydrogen or a substituent selected from halogen, methyl, methoxy, and ethoxy;

to form a third intermediate (VIII);

contacting the third intermediate with a compound of formula (IX):



(IX);

wherein R_5 and R_6 independently of each other are hydrogen, C_1-C_4-alkoxy-C_2-C_4-alkyl, hydroxy-C_2-C_4-alkyl, C_1-C_6-alkyl, C_2-C_6-acyl, aryl, heteroaryl, aryl-C_1-C_2-alkyl, heteroaryl-C_1-C_2-alkyl, aryl-C_1-C_2-acyl, or heteroaryl-C_1-C_2-acyl, and wherein any aryl or heteroaryl, alone or as part of another group, may be independently substituted in one or more positions by C_{1-4}-alkyl, C_{1-4}-alkoxy, C_{1-4}-alkylthio, C_{2-4}-acyl, C_{1-4}-alkylsulphonyl, cyano, nitro, hydroxy, C_{2-3}-alkenyl,

C_{2-3}-alkynyl, fluoromethyl, trifluoromethyl, trifluoromethoxy, halogen, dimethylamino, or methylamino; or

R_5 and R_6 together with the nitrogen atom to which they are bound form a saturated heterocyclic ring having 4-7 ring members which ring may contain an additional heteroatom and which may be substituted by methyl, oxo or hydroxy;

to form the compound of claim 1.

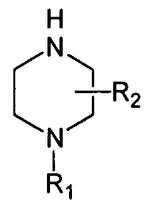
20. The method according to claim 18, wherein R_1 is hydrogen or methyl.

21. The method according to claim 18, wherein R_2 is hydrogen or methyl.

22. The method according to claim 18, wherein R_3 and R_4 both are hydrogen.

23. The method according to claim 18, wherein R_5 and R_6 together with the nitrogen atom to which they are bound form a ring selected from azetidine, pyrrolidine, piperazine, homopiperazine, morpholine, thiomorpholine or piperidine.

24. The method according to claim 18, wherein the converting includes a reaction with a compound of formula (III):


;

wherein R_1 is hydrogen or C_{1-4} alkyl, C_{3-4}-alkenyl, C_{1-4}-acyl, C_{1-4}-alkoxycarbonyl, 2-hydroxyethyl, 2-cyanoethyl or tetrahydropyran-2-yl, or a nitrogen protecting group; and

R_2 is hydrogen, C_{1-4}-alkyl, hydroxymethyl, C_{1-4}-alkoxymethyl or fluoromethyl.